The Limits of Competition in Defense Acquisition
Defense Acquisition University Research Symposium, September 2012

Monopsony Pricing Competition

THE LIMITS OF MONOPSONY PRICING POWER IN THE MARKETS FOR DEFENSE GOODS

David T. Day, 1st Lt, USAF

Abstract

Due to the structure of defense acquisition, the Department of Defense (DoD) purchases goods in both competitive and non-competitive markets, and each environment presents unique challenges to the DoD's ability to influence prices. Operational level purchasing occurs in a competitive market, and small buying offices have relatively little price determination power. The centralization of buying offices could result in greater influence on prices as various smaller purchases are conducted by a single buyer. Any price influence would vary by good, and would be most greatly affected by the civilian use of such goods. If a good has little civilian application, the centralization of buying organizations could have a noticeable impact on price. However, if the good has widespread civilian use the market would remain competitive and the DoD would not achieve price determination power. Large scale military system purchases frequently occur in a non-competitive environment where the DoD is the only purchaser, also known as a monopsony. While the Department of Defense is a monopsonist in the market for restricted military hardware, true market efficiency in production of national defense is not necessarily the DoD's objective. The size of the military and the quantity of military goods purchased by the DoD are dictated by external military threats and the domestic political environment. National defense and military readiness often require resources beyond the point of market-clearing efficiency, and requirements frequently push the quantity of goods demanded beyond the efficient market price. Unable to independently dictate the quantity purchased, the DoD loses its monopsony power. In these cases, the inflexible quantity requirement can actually create higher prices as the producers of the good will require a higher price to offset the additional cost required for greater production. These challenges in both the competitive and non-competitive markets present obstacles to the DoD's ability to influence prices.

Summary

The Department of Defense does not hold significant price determination power despite its apparent position as a monopsonist in the markets for defense goods. This lack of pricing power is a result of the competitive market structure at the operational purchasing level, as well as the unique conditions that the DoD faces at the systems purchasing level.

The Limits of Monopsony Pricing Power in the Markets for Defense Goods

The Department of Defense (DoD) is one of the largest financial and economic forces in the American economy, but its immense size does not yield the power to dictate prices in the markets for defense goods. Due to the structure of defense acquisition, the DoD purchases goods in both competitive and non-competitive markets, and each environment presents unique challenges to the DoD's ability to influence prices. Expectations for the DoD's power to influence market prices come from the concept of monopsony, or a market environment where only one buyer exists. Although defense markets exhibit many traits commonly associated with a monopsony market structure, several unique factors limit the DoD's price setting abilities in the markets for both basic operational and complex systems level defense goods. Centralization of buying activities has been one of the most common processes used in attempts to increase the DoD's monopsony power, and while potential exists for some cost savings, such organizations can yield only limited economically predictable results.

The DoD operates in a largely competitive market when purchasing goods for operational level customers. These goods typically have widespread civilian applications and are purchased by numerous customers in both the civilian and military sectors. Although contractors' accounting systems or risk tolerance could possibly lead centralization of buying organizations to yield lower prices in the markets for some operational level goods, the gains available to the DoD are not economically predictable and will be limited due to the competitive market structure. When the scope of a project increases to the systems level, however, the DoD frequently takes the role of a monopsonist, or the only buyer in a largely non-competitive market for those goods. Goods with little civilian application, or those which are restricted by law to military sales, fall into this category of defense purchases. The DoD demonstrates monopsonist

characteristics at first glance, but the unique attributes of defense acquisition limit any pricing power attained through the monopsony market structure. Although the DoD could potentially dictate prices in the markets where it operates as a monopsonist, defense acquisition becomes a balancing act between the interests of the various parties involved. Final prices are determined by a combination of the interactions of the DoD's mission requirements and desires, the prices necessary to sustain the suppliers' business operations, and the political environment that governs the DoD and all federal acquisition programs. Centralization of purchasing offices does little to increase monopsony power at this level as well, and while some cost savings may be attainable, the success will be limited by the DoD's unique position. These challenges in both the competitive and non-competitive markets for defense goods present strong obstacles to the DoD's ability to influence prices.

Monopsony in Defense Acquisition Literature

The DoD's most obvious path to directly influence prices comes through its role in the monopsony market structure of defense acquisition. In his classic microeconomics textbook, *Intermediate Microeconomics*, Hal Varian (2006) states that "in a monopsony there is a single buyer" (p. 471). In this market structure, the producers compete with one another and lower their prices to make the sale to the lone buyer. Theoretically, the monopsonist buyer should be able to dictate the price for the producers' good as the producers have no other customers to sell to instead. The DoD at first appears to fit neatly in this context when analyzing defense acquisition, and many other analyses certainly treat it as such. Laws, regulations, and common sense prevent non-military buyers from acquiring many military technologies.

In fact, analysis of the DoD's role as a monopsonist in the markets for defense goods is not a new concept, and a small body of literature exists concerning military monopsonies. John

Dreissnack and David King (2004) base much of their study on the reorganization of both the DoD and major defense corporations in their article titled, "An Initial Look at Technology and Institutions on Defense Industry Consolidation" (p. 65). Dreissnack and King hold that the DoD's position as a monopsonist and its reorganization of acquisition programs from service specific purchases to joint systems increased market power in more than just pricing. They propose that the DoD's realignment actually went so far as to incentivize a reorganization of civilian defense corporations in order to more efficiently meet the requirements and win the fewer available contracts.

In another article titled "Analysis of Competition in the Defense Industrial Base: An F/A-22 Case Study," Dreissnack and King (2007) note that defense firms "[deal] with a monopsony customer with regulatory oversight" (p. 58). They state that the markets for defense goods are highly specialized and very few firms actually possess the competency to successfully deal with their monopsonist customer. The authors emphasize that firms inexperienced in the defense industry frequently team with established defense firms in order to deal with the DoD to mitigate the complexities and challenges associated with the monopsony market. While this article focuses primarily on the actions and strategies of prospective suppliers, its reference to the monopsony customer faced by these suppliers provides evidence of the widespread usage of the monopsony model in defense acquisition. Basic acceptance of the DoD as a monopsonist buyer in the markets for defense-specific goods appears in official DoD publications, as well. In the 2006 "Defense Acquisition Performance Assessment Report Foreword" Norman Augustine includes the monopsony market structure of DoD acquisition as one of the primary differences between purchases in defense markets and in markets for civilian goods (p. vii).

The primary thread tying these diverse studies and publications together, however, is the manner in which the monopsony market structure is employed in their analysis. While the DoD's role as a monopsonist buyer is commonly accepted throughout the body of literature concerning the study of defense acquisition, these articles all treat the monopsony environment as a given condition when analyzing defense acquisition, noting that it is the primary difference between studies of defense markets and those for other goods. Studies of defense acquisition clearly show knowledge of the potential for monopsony pricing power under this market structure. However, they rarely explore the unique factors that make the DoD's monopsonist position different from other monopsonies and the impact that these differences have on the DoD's ability to determine prices in the markets for defense goods.

In a significant work outlining potential reasons why the DoD cannot effectively exercise monopsony power, Walter Adams and William James Adams (1972) explore the market structure for defense goods. Their article titled, "The Military-Industrial Complex: A Market Structure Analysis" focuses on "why government fails to use its monopsony power in military procurement" (p. 281). Adams and Adams cite the imperfect flow of critical information between the buyer and sellers in defense markets as one of the primary reasons behind this economic phenomenon. They note that while the government is the only buyer of defense goods, multiple producers frequently team together when bidding on government contracts. Echoing the issues raised by Dreissnack and King, this complication in the markets for defense goods creates yet another type of market structure, known as an oligopoly. An oligopoly exists when there are a small group of producers, leading to increased market power for individual producers. These producers influence each other's pricing and production decisions as they compete to sell their products (Varian, 2006, p. 480).

The producers of a good create an oligopoly and effectively mask the true production cost for any individual firm in this type of teaming situation. While the government could attempt to find an accurate cost prediction by employing expert analysts, Adams and Adams state that "the market power of the monopsonist can thus be practically neutralized by a strong oligopolistic group of sellers obscuring technological efficiencies" (1972, p. 281-282). They also make note that government acquisition policy "shelters" producers from true market forces for the producers of defense goods. As defense contractors receive the majority of their business as a result of government contracts, the monopsonist DoD effectively keeps necessary corporations in business. The United States government needs the capabilities that these corporations provide, and they essentially rely on the guaranteed profits associated with that reliance. This study puts an interesting twist on the traditional assumption that the DoD operates as a standard monopsonist. Instead of simply assuming that a traditional monopsony market exists in defense acquisition, Adams and Adams explore characteristics that limit the DoD's monopsony power and make the defense sector so unique.

Although their analysis focuses on the Canadian defense industry, Lynne Pepall and D. M. Shapiro provide similar insights on the oligopolistic sellers that a monopsonist government faces when operating in the markets for defense goods. Pepall and Shapiro examine "the interaction *between* the military and industry," and focus on the "variety of imperfections" found in defense markets (1989, p. 266). Most interesting among these imperfections is that the Canadian military monopsonist faces oligopolies in "industries characterized by high barriers to entry and exit" (Pepall and Shapiro, 1989, p. 266). These existing oligopolies and the barriers to entry that lead to additional oligopolistic teaming are highly similar to the market structure analyzed by Adams and Adams. They also make a very significant point regarding how the

Canadian military determines what it actually wants to buy. The authors note that "there is little doubt that defence procurement is subject to non-military considerations" (Pepall and Shapiro, 1989, p. 267). Instead of focusing on achieving the lowest cost solutions to issues of national defense, the Canadian government uses its spending to enhance Canadian economic development. Unlike the Adams' and Adams' theory that the United States government keeps necessary defense corporations in business, the Canadian government focuses on developing struggling regions within the country rather than on defense firms. Without complete control over their own purchasing, the Canadian military loses some of the monopsony power that it might otherwise exercise.

In an early study of the defense industry, Oliver Williamson explored the same issue of unbalanced information in his chapter titled "The Economics of Defense Contracting: Incentives and Performance" in the 1967 compilation *Issues in Defense Economics* (p. 232). However, Williamson took a markedly different approach when examining how this difference in information affects the establishment of prices in the markets for defense goods. He considers the DoD's position as a monopsonist in these markets a "structural advantage," and states that the monopsony should give the DoD additional bargaining power when establishing prices. While Williamson acknowledges the same presence of unbalanced information as the other authors, he states that the difference in information itself is not what weakens the government's position. He believes that the true reason for the DoD's loss of bargaining power is that the unbalanced information allows the relationships between negotiators to become an influencing factor in developing the price. However, he adds that the very nature of this position restricts the DoD's ability to take a firm stance in the bargaining arena. Instead, Williamson examines the behaviors of the negotiators. The professional relationships between the government's acquisition

professionals, the government itself, and defense producers have a profound impact on the actual outcomes of pricing negotiations. Williamson states that "if the Service's rewards for tough bargaining are weak, a tendency to make concessions in order to obtain professional favor seems likely" (1967, p. 233). In these negotiations, he claims that the party with the lower "status" or professional reputation is the one that requires the professional favor and typically makes the concessions. Furthermore, he believes that "inferior status is generally imputed to the civil servant relative to his counterpart in private industry" (Williamson, 1967, p. 232). With this model of bargaining decisions influenced by the actions of the negotiators, the government loses significant monopsony pricing power as "for the civil servant, taking a tough bargaining posture may well expose him to contempt rather than enhance his professional recognition" (Williamson, 1967, p. 232).

The Markets for Operational Level Defense Goods

While the DoD's major monopsonist acquisitions receive the most scrutiny, defense acquisition generally falls neatly into a purely competitive market structure at the operational level. A competitive market occurs when "each consumer or producer is a small part of the market as a whole and thus has a negligible effect on the market price" (Varian, 2006, p. 289). Neither individual buyers nor individual sellers have the power to affect prices on their own in this type of market. Many of the goods required for base level operations, support, and sustainment have widespread civilian application. As such, there are multiple DoD and civilian buyers for these goods. When multiple buyers are present, an individual buyer does not have the power to dictate a significantly lower price, as producers can simply turn to other buyers that are willing to pay a higher price if one buyer balks. Similarly, unless a good is produced using exclusive intellectual property rights, there are frequently multiple sellers for operational level

goods as well. As with the pricing environment created by multiple buyers, an individual seller cannot set a significantly higher price than his or her competitors as the potential buyers can simply turn to another firm with lower prices.

Centralizing the various defense buying organizations has the potential to create some additional pricing power for the DoD. However, this additional power has its limits. If the good in question still has widespread or common civilian application, then reducing the number of defense offices purchasing the good would not effectively create the monopsony market structure necessary to command lower prices in theory. These goods make up the bulk of supplies and services purchased by operational level contracting organizations and can cover items as small as office supplies or as large as vehicles. As long as a civilian purchaser is willing to pay a higher price, then producer firms would have little incentive to set their prices at a lower rate and would simply sell their goods to the civilian purchaser even if military buying activities have been consolidated. One current DoD example of consolidation at the operational purchasing level is the United States Air Force's establishment of the Enterprise Sourcing Group. With operating locations in Ohio, Texas, and Nebraska, the group explicitly states that one of its goals is to "leverage Air Force buying power" by removing the responsibility for acquiring "medical, information technology, force protection, furnishings, office supplies, and civil engineering" from local installations and consolidating them under one agency-wide umbrella (88th Air Base Wing, 2011). Even after centralization the Enterprise Sourcing Group primarily purchases goods and services that have widespread civilian application. Although this purchasing model may reduce the administrative cost to the United States Air Force associated with processing redundant individual contract actions, these gains can only have a limited influence on pricing due to the competitive market structure in the markets for these goods. While this is not a

criticism of efforts to centralize DoD purchasing, any expectations of potential cost savings associated with centralization should be tempered by economic theory.

While centralization has little economically predictable effect on prices in a competitive market, such reorganization of operational level defense acquisition could theoretically present an opportunity for the expansion of DoD's pricing power under limited circumstances. The presence of civilian purchasers in these markets prevents a monopsony market from occurring, but it does not preclude the possibility of achieving some limited lower pricing through bulk purchases. Suppliers are frequently willing to provide quantity discounts, and cost savings may be attainable under these circumstances as suppliers attempt to establish a guaranteed cash flow. Such pricing opportunities are a result of the producers' accounting practices and individual risk tolerances, and they are not dictated or controlled by the government. These pricing changes are not a predictable occurrence caused by the interaction of economic forces, however, and they are not a justifiable reason to consolidate purchasing on their own.

If the goods in question are purely defense related or are may only purchased be by DoD contracting activities by law, then centralization could indeed present a potential for increased pricing power by creating a monopsony market structure. Common examples of operational level purchases that would fit into this category would be parts or accessories for military weapons or vehicles, which are purchased by various military offices but would likely be restricted from purchase by civilian organizations and individuals. Different buying offices and their respective customers may vary in their willingness to pay, and suppliers can price their goods accordingly. Just like a competitive market populated with other civilian buyers, when one defense contracting office is willing to pay a higher price for a good than others, sellers will have little incentive to lower their prices. Centralizing purchasing offices could effectively mask

the higher demand and increase negotiating power for the government. Without civilian customers, sellers would have little bargaining room. In such a situation, sellers are forced to either provide their goods at the price dictated by the monopsonist or withdraw from the market entirely. Such centralization would also eliminate the variance in government estimates and differences in willingness to pay currently experienced in the operational defense acquisition marketplace. This information could provide the ability to create more accurate budgets and more efficiently determine requirements in an era of limited funding.

Monopsony savings through joint purchases could be achieved by buying organizations such as the Defense Logistics Agency (DLA), a joint entity that focuses on purchasing "nearly 100 percent of the consumable items America's military forces need to operate, from food, fuel and energy, to uniforms, medical supplies, and construction and barrier equipment" (Defense Logistics Agency). These goods fit neatly within the operational level of DoD purchasing, and the DLA represents a successful use of consolidation directed toward flexing monopsony power in defense acquisition. By consolidating the contracts and the purchase of the various branches of the US military, the DoD can attempt to leverage its position as a monopsonist in the markets for defense goods. However, the markets for goods with civilian application will still not be as responsive to the DoD's size as other purchasers will continue to act independently in the markets for such items.

Monopsony Markets for Systems Level Defense Goods

Civilian purchasers prevent the DoD from experiencing strong pricing power at the operational level, but the unique nature of the DoD's monopsony explains the DoD's lack of pricing power at the systems acquisition level. One major area in which defense analysis of a monopsony differs from the traditional (and simplest) studies of the monopsony market structure

is in the procurement of intermediate goods. The DoD does not use the goods it purchases as inputs in the production of final products to sell. Most analyses of monopsony markets deal with the purchase of intermediate goods. In these cases, monopsonists purchase the amount of the intermediate goods necessary to produce their own final goods at a profit maximizing level of output. Instead of operating for profit, the DoD is responsible for the production of security for the United States. National defense is a public good, or "a good that must be provided in the same amount as all affected customers." (Varian, 2006, p. 671) As such, the "customers" of the DoD do not purchase defense specifically, but rather contribute to it through taxes. Unlike goods produced by traditional monopsonists, national defense is not necessarily dependent on prices of inputs or the sale price, a concept that is crucial to the DoD's lack of monopsony power. Instead, the DoD can be treated as a simple consumer, purchasing the goods for its own use rather than as inputs in other goods for sale. A rational consumer will always attempt to maximize their own utility and will prefer a lower price. In this context, the DoD will press producers to the lowest price possible.

While the DoD may be a monopsonist as the only purchaser of large scale defense goods, its power to dictate lower prices only goes so far. Producers can only lower their prices to a certain level and still have an incentive to operate in the market at all. Under pressure from the monopsonist to lower prices, competing producers will lower their prices until they fall below the average variable cost for each item produced. This cost is equal to the variable costs required for production, divided by the quantity of the good produced, and is related to inputs such as the materials or utilities used in producing the goods. Average variable cost does not account for the fixed costs associated with production of the goods. Fixed costs often appear as startup costs related to machinery or equipment. Average variable cost differs from the marginal cost, or the

cost of producing one additional item, and it takes the cost of producing previous goods into consideration. Producers maximize their profit when they reach the point of production where the cost of producing one additional good exceeds the price at which that they could sell that good. Producers can continue to create and sell additional goods at a loss without shutting down as long as the price they receive for the goods exceeds their average variable cost. However, when the cost of producing a given quantity of goods exceeds the price that the firm can expect to receive for the goods, there is no incentive to continue production and the firm shuts down.

The possibility of a shutdown keeps the DoD from demanding excessively low prices. If the DoD is not willing to pay a per-unit price high enough to at least cover the costs of production, then producers will simply not enter into contracts with the government. In fact, the theoretical minimum price is likely lower than the required price for operation in the real world as producers operate under a profit-driven structure and are concerned with covering more than just their average costs per unit produced. Without a substantial per-unit profit included in the price, the DoD would be unlikely to find producers willing to devote the massive amounts of resources required to produce large scale defense systems. Economic theory holds that the DoD will have to pay at a level that incentivizes production, but this occurrence is also consistent with the theory presented by Adams and Adams in "The Military-Industrial Complex: A Market Structure Analysis" (1972, p. 282). They proposed that the government effectively keeps defense corporations in business in order to meet its acquisition needs. This is in essence true as companies would prefer to shutdown if prices were not high enough to incentivize operation. Although an apparent monopsonist, the DoD clearly shares a significant amount of pricing power with the producers of defense goods.

While a significant portion of the pricing power related to large scale defense systems lies with the producer, the DoD loses significant influence on the prices it pays for goods due to the fact that it cannot independently dictate the quantities of these goods that it requires. The defense acquisition process is complicated by long term planning against future threats, short term budgetary complications, and even political pressure from the legislative branch of government. Producers rely heavily on the quantity required when determining their entry to or exit from the market, and the DoD may be forced to purchase more or less than it wants of a specific good based on any of these outside forces. Once again, the average cost of producing an individual item comes into play when determining the price of a defense good. The average cost changes with the quantity produced, and a typical monopsonist will choose to purchase the quantity that maximizes their profits, and since the DoD does not use the goods in purchases in production of another item for sale, it should rationally act to purchase the necessary quantity to meet its objectives at the lowest cost possible. While the DoD might desire a given quantity, it does not always have the actual ability to purchase at that level.

Although the DoD would prefer to unilaterally determine the quantity of a good that it requires unilaterally, the very nature of public defense limits such action. The DoD can structure its forces through acquisition in an effort to create certain postures or meet certain goals, but foreign threats and actions are frequently out of the DoD's control. A frequent example of foreign actions determining the future of acquisition programs arose in recent years in the debate over focusing the structure of forces to counter unconventional threats such as terrorism or to increase the number of conventional platforms such as fighter aircraft in the United States' arsenal to defend against traditional foreign militaries. While the DoD may initiate a long term strategy in regards to defensive posturing, threats may appear that require new or different

acquisitions. For example, programs such as the F-22A Raptor and F/A-35 Lightning II fighter aircraft were planned decades in advance of their production. Before these systems were operational, the terrorist and unconventional warfare threats presented by 9/11 and the Afghanistan and Iraq conflicts required a shift towards special operations forces rather than conventional attack platforms. Changes in the DoD's immediate mission focus and the military hardware required resulted in rapid changes in the quantities of goods that the DoD needed.

Political forces hold significant influence in dictating the quantities of defense goods purchased, as well. As Congress must approve the federal budget, the legislative branch of the United States government has the ultimate authority for the quantities of major system goods that the DoD is able to purchase. Individual legislators may support or oppose the procurement of major defense systems in efforts to gain favor with their constituents, to appease lobbyist groups, or even for partisan political reasons. The causes and determinants of military spending are varied, and have generated a vast body of literature on that topic alone. For example, a 1979 article titled "The Political Economy of US Military Spending" by Miroslav Nincic and Thomas R. Cusack acknowledged the challenge in discovering the determinants of military spending, but presented a compelling argument that "the political or electoral value of the perceived economic effects arising out of such spending, and the pressures of institutional-constituency demands" have a significant influence on how the DoD actually spends (p. 101). Defense programs have long been considered a strong way to boost employment in the areas where major defense contractors are located. Legislators with these types of firms in their districts are frequently staunch supporters of military spending and are far more likely to approve or push for additional goods to be purchased. Similarly, politicians under pressure from their constituents to rein in

spending will be far more willing to vote against future major defense systems, or to make significant cuts to acquisitions still in progress.

The F-22A Raptor program presents a clear example of political forces dictating the quantity of military goods purchased. In an era of financial crisis while facing few immediate aerial threats, the program became a prime target for cuts. As the quantity of F-22s required decreased from a total of 648 initially ordered to a final purchase of 188 aircraft, the average cost of production skyrocketed. The Government Accountability Office estimated that the unit cost for an F-22 rose from its original estimate of $139 million per plane to an exorbitant $412 million each (Government Accountability Office, 2011 p. 13). While some of these increases were the results of additional changes as the project developed, the F-22A program clearly shows how the DoD loses significant per-unit pricing power when it does not have complete control over the quantities of goods that it purchases.

The presence of few competent producers of major defense systems further complicates the markets for defense goods. While it first appears that the DoD operates in a pure monopsony environment, the oligopolistic characteristics of the sellers in the markets shift additional pricing power to the producers. In order for the DoD to accurately minimize the costs associated with purchasing at any given level it must have accurate information regarding the seller's cost of production at that quantity of the good produced. As both Adams and Adams, and Pepall and Shapiro explored in their papers, the oligopolies created by defense firms teaming together have the potential to effectively mask the true production costs for defense goods. Collaborations of this type are incredibly common in the defense industry, and they appear in everything from aircraft to space lift systems. One prime example of such teaming is the corporation known as United Launch Alliance. The company was founded in 2006 as “a 50-50 joint venture owned by

Lockheed Martin and The Boeing Company" in order to create and provide more efficient space launch services for customers within the United States government's various agencies (United Launch Alliance, 2011). Prior to this collaboration, Boeing and Lockheed were major competitors in the provision of space launch systems with their Atlas and Delta rockets. By working together, Boeing and Lockheed limit the competition between the two companies and mask the true production costs for independent actors in the market for space launch vehicles. In this type of market, the DoD will have fewer choices when purchasing the goods it requires, and the producers can demand a higher price by concealing their true production cost.

The DoD operates in a unique market structure with respect to major system acquisition. While it does appear to be a monopsonist in the markets for defense goods, external forces and mission requirements prevent the DoD from exerting the pure pricing power that it would prefer. Centralization of purchasing agencies would have little effect in regards to major acquisition programs, as any true monopsony pricing power that the DoD might hold is negated by producers' average variable costs, quantity requirements dictated by political forces, and foreign threats. Operational level purchasing occurs in a competitive market structure, and the DoD cannot achieve significant economically predictable pricing power. Under these circumstances, little rationale for consolidating purchasing agencies exists.

Shifting toward a "one size fits all" model of using major systems to meet various joint requirements could be the type of reorganization that yields considerable cost savings, but not necessarily through monopsony price determination. Dreissnack and King explore the potential for savings through consolidation in their 2004 paper. They contend that the Federal Government is the sole buyer of defense-specific goods, the authors hold that "the emphasis on joint programs has also increased the monopsony power of the government as procurement is

further centralized from the different armed services" (Dreissnack and King, 2004, p. 70). Eliminating redundancy certainly reduces the costs associated with creating entirely new programs or systems, and using established supply chains or production facilities further lowers the costs associated with the production of defense goods. However, analysis of the F-35 aircraft example provides evidence that the reorganization of DoD purchasing and joint procurement solutions have little economically predictable effect on price. The F-35 program aimed to find a single fighter/attack aircraft for the United State Air Force, Navy, and Marine Corps rather than develop unique platforms to fulfill similar missions for each service. Although the monopsony concept clearly applies to the joint acquisition of the F-35 with the DoD as a single buyer, there is little difference between this situation and what might have happened had the services each purchased their own aircraft.

Without the joint program, the Air Force, Navy, and Marines would have fielded separate solicitations for separate aircraft, essentially creating three independent monopsony markets for three different products. The Air Force, Navy, and Marine Corps would have all become monopsonists in the markets for their own aircraft. Any monopsony-based cost savings in joint program acquisition would only come through purchases of identical goods that would be purchased by the different services individually. In fact, the F-35's official history indicates that savings as a result of increased pricing power by consolidating the buying offices was not one of the program's goals. Instead, the DoD states that "the cornerstone of the program is affordability based on a next-generation, multi-role strike fighter aircraft that will have a 70 to 90 percent commonality factor for all the variants, significantly reducing manufacturing, support and training costs" (Department of Defense). While the savings resulting from the consolidation of purchasing offices in this program may prove to be significant, they are not a result of any true

monopsony power. Centralization may prove to be successful at the major systems level in defense acquisition, but the successful pricing power is unlikely to come from the DoD's position as a monopsonist in the markets for defense goods.

Conclusion

Although the DoD has great influence in the United States economy, it does not experience the pricing power that many expect in the markets for defense goods. The dual market structures in which DoD acquisitions occur each have their own factors which prevent a true exercise of monopsony pricing power. The operational level of defense acquisition occurs in a perfectly competitive market. The civilian application of operational level defense goods and the number of other buyers in these markets prevent the DoD from becoming a monopsonist, and consolidation of purchasing agencies will have little economically predictable effect on the DoD's ability to influence prices. While the DoD is the only buyer for defense goods at the major systems level of acquisition, the structural restrictions of defense markets prevent it from fully exercising its monopsony power. The DoD is unable to independently determine the quantity of goods that it purchases due to the nature of foreign threats and political forces, and additional monopsony power slips away as producers still require incentives to produce at the levels that the DoD requires. Centralization of buying organizations will have little effect on pricing power at the systems level of acquisition either due to the structural limitations associated with the markets for defense goods. The very natures of the markets for defense goods clearly prevent the DoD from fully exercising the price setting power that would typically accompany its position as a monopsonist.

Author Biography

First Lieutenant David T. Day is a United States Air Force contracting professional and is currently serving as Executive Officer, 11th Mission Support Group, Joint Base Andrews, Maryland. He holds a Bachelor of Science degree in Political Science and Economics from the United States Air Force Academy and a Master of Science degree in International Economics from Baylor University. Lieutenant Day's research interests include international trade and defense economics.

References

88th Air Base Wing. (2011). Enterprise Sourcing Group. Retrieved June 28, 2012, from http://www.wpafb.af.mil/shared/media/document/AFD-110815-054.pdf

Adams, Walter, & Adams, William James (1972). The Military-Industrial Complex: A Market Structure Analysis. *The American Economic Review, 62 (1),* 279-287.

Augustine, Norman R. (2006). *Defense Acquisition Performance Assessment Report, Foreward*. Washington, DC: Department of Defense.

Department of Defense. History > F-35 Acquisition. Retrieved June 28, 2012, from http://www.jsf.mil/history/his_f35.htm

Defense Logistics Agency. DLA at a Glance. Retrieved June 28, 2012, from http://www.dla.mil/Pages/ataglance.aspx

Dreissnack, John D., & King, David R. (2004). An Initial Look at Technology and Institutions on Defense Industry Consolidation. *Defense Acquisition Research Journal,35,* 63-77.

Dreissnack, John D., & King, David R. (2007). Analysis of Competition in the Defense Industrial Base. *Contemporary Economic Policy, 25 (1),*57-66.

Government Accountability Office. (2011). *Defense Acquisitions: Assessments of Selected Weapon Programs*. Washington, DC: Government Printing Office.

Nincic, Miroslav, & Cusack, Thomas R. (1979). The Political Economy of US Military Spending. *Journal of Peace Research, XVI (2),* 101-115.

Pepall, Lynne M., & Shapiro, D. M. (1989). The Military-Industrial Complex in Canada. *Canadian Public Policy/Analyse de Politiques, 15 (3),* 265-284.

United Launch Alliance. (2011). ULA Company Overview. Retrieved June 28, 2012, from http://www.ulalaunch.com/site/pages/About_Overview.shtml

Varian, Hal R. (2006). *Intermediate Microeconomics*. New York, NY: W. W. Norton & Company.

Williamson, Oliver E. (1967). The Economics of Defense Contracting: Incentives and Performance. In Roland N. McKean (Ed.), *Issues in Defense Economics* (pp. 217-278). New York, NY: National Bureau of Economic Research.